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## Transesophageal markers of thromboembolism in non-valvular atrial fibrillation patients with a CHADS2 score = 0

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*Background.*— Transesophageal echocardiography (TEE) parameters (left atrial appendage, LAA thrombus or spontaneous echocardiographic contrast (SEC), aortic atheroma (AAA) are powerful markers of thromboembolism (TE) in non-valvular atrial fibrillation (NVAF) patients. However, the prevalence and potential impact of these abnormalities have not been evaluated in patients at very low risk of TE. We evaluated TEE-detected LASEC, thrombus and AAA in AF patients referred for cardioversion and analyzed the subgroup of patients with a CHADS2 score = 0.
*Patients.*— Among 763 consecutive patients hospitalized for NVAF, prior to cardioversion, TEE was systematically performed within 24 h after admission; 205 patients had a CHADS2 score = 0. The following parameters were described: presence and severity of LASEC, LA thrombus, aortic atheroma (AAA).
*Results.*— Mean age was 54.5 ± 13.5 years. AF was paroxysmal in 101 patients (49.3%), persistent in 82 (40.0%) and permanent in 22 (10.7%). Transthoracic echocardiography showed LVEF < 40% in 12 (5.9%) and median of mean LA area was 18 (15—23) $cm^2$. LA thrombus was found in one patient (0.5%), LASEC in 60 (29.3%), classified as mild in 43 (21.0%), moderate in 14 (6.8%) and severe in three (1.5%). AAA was present in six patients (2.9%). The Table 1 compares some baseline characteristics in patients with (LAASEC/thrombus or aortic atheroma ≥ 4 mm) or without TEE abnormalities, defined as an endpoint.
In the multivariate analysis, age (OR, 1.04, 95% CI 1.01—1.07), non paroxysmal AF (OR, 3.23, 95% CI 1.54—6.78) and LA area (OR, 1.08, 95% CI 1.02—1.16) were predictors of TEE-detected LASEC/thrombus or aortic atheroma.
*Conclusions.*— TEE prior to cardioversion in NVAF found TEE-detected risk markers of thromboembolism (LASEC/thrombus or aortic atheroma) in one third of patients with a CHADS2 score = 0.

**Table 1**

| | NVAF with LAASEC/ thrombus or aortic atheroma ≥ 4 mm at TEE | NVAF without any TEE abnormality | *P* |
|---|---|---|---|
| *n* (%) | 62 (30.2) | 143 (69.8) | — |
| Male/Female | 46 (74.2) | 103 (72.0) | 0.749 |
| Age, year | 59.9 ± 11.5 | 52.2 ± 13.6 | 0.0002 |
| History of AF | 22 (35.5) | 37 (25.9) | 0.163 |
| LVEF < 40% | 5 (8.1) | 7 (4.9) | 0.375 |
| Mean LA area, $cm^2$ | 21 (17—25) | 17 (14—21) | < 0.0001 |
| $CHA_2DS_2VASc$ score | 1 (0—2) | 1 (0—1) | 0.0312 |

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## Left ventricular mass index is an independent determinant of severe diastolic dysfunction in patients on chronic hemodialysis

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*Objectives.*— Diastolic dysfunction is the most common entity of heart failure. The purpose of this study is to identify the determinant(s) of severe diastolic dysfunction (defined by a E/e′ ratio > 15 on Tissue Doppler Imaging: TDI), in patients on chronic hemodialysis (HD).
*Patients and methods.*— Seventy-two patients on chronic HD and preserved LV systolic function were included in the study. LV function was assessed by Doppler echocardiography, left ventricular mass index (LVMI) was estimated by echocardiography using formula of Devereux and Reicheck. Our Patients were divided in two groups based on E/e′ ratio measured by TDI: group I (E/e′ ≤ 15; *n* = 61) and group II (E/e′ > 15, *n* = 11).
*Results.*— No differences were noted between the two groups concerning age, gender, body mass index, proportions of arterial hypertension and diabetes, duration of dialysis, blood pressure and use of drugs.
On echocardiography, there were no significant differences for E/A ratio, deceleration time, and pulse wave velocity between both groups.
However, LVMI was higher in group II (group I = 247 g/$m^2$, one group II = 419 g/$m^2$; *P* < 0.001), the dilatation of the left atrium was more important in group II (*P* = 0.01). On multiple regression analysis, LVMI was the only independent determinant of E/e′ ratio (*P* = 0.001).
*Conclusion.*— Our findings suggest that LVMI is an independent determinant of LV severe diastolic dysfunction in patients on HD.

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## Interest of study of left ventricular function by two-dimensional longitudinal strain in patients with acute coronary syndrome without ST elevation

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*Introduction.*— The 2D strain echocardiography is a new technique to analyze ventricular function in all dimensions. The objective of our study is to emphasize the value of 2D strain in detecting infra clinical myocardial ischemia in acute coronary syndrome without ST elevation.
*Patients and methods.*— This is a prospective study from October 2011 to June 2012 included 30 patients admitted for acute coronary syndrome without ST elevation. All of them have had clinical examination, ECG, cardiac enzyme dosage, echocardiography with analysis of longitudinal left ventricular function by 2D strain and coronary angiography.
*Results.*— The average age of patients was 62.2 ± 8.08 years, [26 men and four women], they had more than three cardiovascular risk factors dominated by hypertension [63%], smoking [55.6%] and diabetes [45.6%], previous history of ischemic heart disease was found in 39.3% of cases.
The typical chest pain was the mode of revelation in 95% of cases, with ST segment elevation in 36% of cases, negative T waves in 61% of cases, troponin was positive in all cases. Concerning echocardiography, the left ventricle was not dilated in majority of cases with preserved systolic function [EF = 57.78 ± 6.89%], but the two-dimensional longitudinal strain was altered [−14.41 ± 3.34%], a very strong linear correlation between the conventional and new parameters was observed [OR = 2.75, *P* = 0.02]. In coronary angiography, 25.9% of patients had single vessel lesions, 37% had two vessels lesions and 35,1% had three vessels lesions, a strong